

Amendments to the Drawings:

The attached one (1) replacement sheet of drawings includes changes to Figs. 1-3, and the attached one (1) new sheet of drawing introduces new Fig. 4. The replacement sheet, which includes Figs. 1-3, replaces the original sheet including Figs. 1-3. In Figs. 1-3, the indicator line for element 12 has been clarified. In Fig. 3, the threading of threaded connectors 13 and 14 has been provided. In Fig. 4, the overall arrangement of a motor vehicle 100 containing a bottom section 10 of the housing for electronic control units, which bottom section 10 includes two cooling channels 12 connected by a cross hole 101, has been schematically illustrated.

Attachments: 1 replacement sheet and 1 new sheet.

REMARKS

I. Introduction

Claims 1-12 are pending in the present application. Claim 1 has been amended. In view of the foregoing amendments and the following remarks, it is respectfully submitted that all of the presently pending claims are allowable, and reconsideration is respectfully requested.

Applicants note with appreciation the acknowledgment of the claim for foreign priority and the indication that all of the certified copies of the priority documents have been received.

II. Objection to the Specification

The Examiner objected to the Specification because the title of the invention is allegedly not descriptive. In response, the title has been amended in accordance with the Examiner's suggestions.

III. Objection to the Drawings

In response to the Examiner's objection to the drawings, Applicants have amended Figs. 1-3 and introduced new Fig. 4. In Figs. 1-3, the indicator line for element 12 has been clarified. In Fig. 3, the threading of threaded connectors 13 and 14 has been provided. In Fig. 4, the overall arrangement of a motor vehicle 100 containing a bottom section 10 of the housing for electronic control units, which bottom section 10 includes two cooling channels 12 connected by a cross hole 101, has been schematically illustrated. Applicants have made corresponding amendments to the Specification to reflect the drawing changes. No new matter has been introduced since the amendments to the drawings are fully supported by the original written description in the Specification.

IV. Rejection of Claims 1 & 3-12 Under 35 U.S.C. § 102(b)

Claims 1 and 3-12 are rejected under 35 U.S.C. §102(b) as being clearly anticipated by United States Patent No. 6,302,190 ("Clamp et al."). For at least the following reasons, the anticipation rejection of pending claims 1, 3-12 should be withdrawn.

To anticipate a claim under §102(b), each and every element as set forth in the claim must be found in a single prior art reference. Verdegaal Bros. v. Union Oil Co. of Calif., 814 F.2d 628, 631, 2 U.S.P.Q.2d 1051, 1053 (Fed. Cir. 1987). Furthermore, "[t]he identical invention must be shown in as complete detail as is contained in the . . . claim." Richardson v. Suzuki Motor Co.,

868 F.2d 1226, 1236, 9 U.S.P.Q.2d 1913, 1920 (Fed. Cir. 1989). That is, the prior art must describe the elements arranged as required by the claims. In re Bond, 910 F.2d 831, 15 U.S.P.Q.2d 1566 (Fed. Cir. 1990). It is respectfully submitted that Kaneyuki does not teach each and every limitation of pending claims 1-7, for at least the following reasons.

Claim 1 recites “[a] housing for electronic control units comprising: a bottom section for attaching the electronic control units; and **a cooling device for enabling heat to be dissipated from the housing via a liquid** flowing therethrough, **wherein the cooling device is integrally formed in the bottom section.**” Although the Examiner cites element 30 of Clamp as teaching the claimed cooling device limitations, Applicants respectfully submit that Clamp does not teach or suggest all of the claimed cooling device limitations, as explained in detail below.

In reference to the exemplary embodiment shown in Figures 4-7 of Clamp, Applicants note that the housing part that most closely resemble the Applicants’ claimed “bottom section” is the housing part that has the so-called “rear surface 26.” It is described in column 2, line 12 ff. of Clamp that the electronic control unit (ECU) has, on one hand, a front face, on which various electrical connection terminals 22, 24 are shown, and on the other hand, a rear surface 26. From this description, it is clear that the ECU 20 shown in Figure 4 and Figure 5 has a housing that is already self-contained, i.e., the ECU 20 shown in Figures 4 and 5 of Clamp already represents a device having a complete housing. According to Figure 6, this control unit 20 **already having a complete housing** is coupled with (i.e., inserted into) a **separate** “chill plate 30.” When the box 28 of ECU 20 is inserted into pocket 36 of the chill plate 30 (see column 2, line 40 ff. of Clamp), then a small space (or intermediate gap) is formed between the box 28 and the pocket 36. The **cooling channel 40 is formed on the back side of the separate chill plate 30**, which cooling channel 40 is covered by a cover plate 34. (Figure 2; col. 2, l. 26-32). As described in column 2, lines 44 through 53, the heat transferred from control unit 20 onto chill plate 30 is carried off through the cooling channel 40. Therefore, although Clamp shows a cooling device, by which heat is carried out of the housing of control unit 20 via a fluid (e.g., fuel) passing through, Clamp clearly does not teach or suggest **a cooling device integrally formed in the bottom section** of a housing for an electronic control unit; instead, Clamp discloses **a physically separate cooling device**, i.e., the chill plate 30 containing the cooling channel 40, which is not an integral part of the housing of the ECU 20.

For at least the foregoing reasons, Applicants submit that claim 1 and its dependent claims 3-12 are not anticipated by Clamp.

Independent of the above, claim 3 is not anticipated by Clamp for further reasons, since the bottom section of the self-contained housing of the ECU 20 clearly does not take the form of a cooling plate; instead, the cooling plate 30 of Clamp is a physically separate component from the housing of the ECU 20.

Independent of the above, claim 4 is not anticipated by Clamp for further reasons, since the cooling channel 40 of Clamp is a part of the chill plate 30, which is separate from the housing of the ECU 20.

Independent of the above, claim 5 is not anticipated by Clamp for further reasons, since Clamp does not show sectional members provided for dissipating heat and reinforcing the base section, which sectional members are situated outside of the cooling channel formed in the bottom section of the housing for ECU 20.

Independent of the above, claim 6 is not anticipated by Clamp for further reasons, since Clamp does not show a linear cooling channel; instead, Clamp shows a U-shaped cooling channel.

Independent of the above, claim 7 is not anticipated by Clamp for further reasons, since Clamp does not show a circular cross-section for the cooling channel, as shown in Figs. 2 and 6

Independent of the above, claim 9 is not anticipated by Clamp for further reasons, since Clamp does not show separate cooling channels. If one skilled in the art looks at the "chill plate 30" from Figure 2, e.g., in conjunction with Figure 6 and Figure 7 as well, then the following would be readily apparent from Figure 2: reference numeral 46 represents the inlet, which causes the coolant, as soon as it has penetrated the housing from above (Figure 2), to be initially directed to the right by partition walls 42, 44, in order to be finally diverted downwards at the temporary right end, and then finally to the left. If the coolant reaches the left outer wall again after its path around "pocket 36," then the coolant is diverted downwards, in order to be diverted to the right again at the lower side on the next partition wall 44, and to be diverted downwards again and finally to the left at the other end of the cooling plate, and to finally reach outlet 48 (Figure 7). Therefore, it is obvious that no separate cooling channel is provided, since only one cooling channel is present.

Independent of the above, claim 10 is not anticipated by Clamp for further reasons, since Clamp does not show several separate cooling channels connected by at least one separate cross hole.

V. Rejection of Claim 2 Under 35 U.S.C. § 103(a)

Claim 2 was rejected under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent 6,302,190 ("Clamp") in view of U.S. Patent 6,742,326 ("Xu"). Applicants respectfully submit that claim 2 is allowable for at least the following reasons.

Claim 2 depends on claim 1. As noted above, Clamp fails to teach or suggest all of the claimed features of claim 1. Furthermore, Xu fails to remedy the deficiencies of Clamp as applied against parent claim 1. Accordingly, for at least the foregoing reasons, Applicants submit that dependent claim 2 is not rendered unpatentable by the combination of Clamp and Xu.

In rejecting a claim under 35 U.S.C. § 103(a), the Examiner bears the initial burden of presenting a prima facie case of obviousness. In re Rijckaert, 9 F.3d 1531, 1532, 28 U.S.P.Q.2d 1955, 1956 (Fed. Cir. 1993). To establish prima facie obviousness, three criteria must be satisfied. First, there must be some suggestion or motivation to modify or combine reference teachings. In re Fine, 837 F.2d 1071 (Fed. Cir. 1988). This teaching or suggestion to make the claimed combination must be found in the prior art and not based on the application disclosure. In re Vaeck, 947 F.2d 488, 20 U.S.P.Q.2d 1438 (Fed. Cir. 1991). Second, there must be a reasonable expectation of success. In re Merck & Co., Inc., 800 F.2d 1091, 231 U.S.P.Q. 375 (Fed. Cir. 1986). Third, the prior art reference(s) must teach or suggest all of the claim limitations. In re Royka, 490 F.2d 981, 180 U.S.P.Q. 580 (C.C.P.A. 1974). To the extent that the Examiner may be relying on the doctrine of inherent disclosure for the anticipation rejection, the Examiner must provide a "basis in fact and/or technical reasoning to reasonably support the determination that the allegedly inherent characteristics necessarily flow from the teachings of the applied art." (See M.P.E.P. § 2112; emphasis in original; see also Ex parte Levy, 17 U.S.P.Q.2d 1461, 1464 (Bd. Pat. App. & Inter. 1990)).

CONCLUSION

It is respectfully submitted that all pending claims 1-12 of the present application are in allowable condition. Prompt reconsideration and allowance of the application are respectfully requested.

Respectfully submitted,

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